
Measurements of dust in the solar system as messengers for planetary science

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Solar system dust, and interstellar dust in the solar system have been measured since half a century with in situ detectors. These dust particles are not the pristine particles from the protoplanetary disk, but are 'new' dust, generated from asteroid collisions, comet sublimation, dust ejected from atmosphereless bodies, or is contemporary interstellar dust from the local interstellar cloud. These particles provide a means to study the pristine objects in the solar system without the need to land, by sampling different dust particles coming from different parental bodies. The development of instrumentation for in situ dust science has evolved over the years. New instrument types are ready to tackle new science questions. This talk reviews the current state of the art of cosmic dust measurements in the solar system, missions currently planned, and science questions for the near future.